

Working Paper on

Accounting for the  
Value of People:  
A Necessary Step in  
Implementing Strategic  
Human Resource Management

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# CHAPTER 1

## INTRODUCTION

*Improving the “quality” of decisions . . . requires a greater focus on the value created by human resources (and the policies and practices that influence them), rather than simply on the cost – as it is today.*

In the course of conducting its first Quadrennial Defense Review (QDR), the Department of Defense explored fundamental questions about how it will do business in the future.<sup>1</sup> The Quadrennial Defense Review anticipates some parts of the department doing business in revolutionary new ways – using revolutionary new business practices.

In line with the intent of the Quadrennial Defense Review, the 8<sup>th</sup> Quadrennial Review of Military Compensation argues that in order to maximize effectiveness in those areas desiring to do business in revolutionary new ways, the department must align its support systems, especially the human resource management system, to its strategic plans. To align the human resource management system in this manner requires human resource management leaders to assume a new, more strategic role; this role focuses them on achieving the outcomes desired by the organization and its subunits.<sup>2</sup> Human resource leaders must become full partners with commanders and other line leaders in achieving results and must actively help shape the behaviors of people as the organization transitions to doing business in new ways.

However, making the right decisions regarding policies and practices will be hampered unless the resource allocation process is changed as well. “Good decisions” may be difficult or impossible to make if the analysis of their cost and effectiveness is not accurately reflected in the Planning, Programming and Budgeting System.<sup>3</sup> Improving the “quality” of decisions made in the context of this system requires a greater focus on the *value* created by human resources (and the policies and practices that influence them), rather than simply on the *cost* – as it is today. This paper suggests that the concepts and practices of “human value management” offer a useful framework for the department to make its words about how much it values its people reality.

### **Human Value Management: Achieving Desired Outcomes Through People**

The Quadrennial Defense Review faced the issue of defining the business of the department as it will exist in the uncertain environment of the post-cold war era. Externally, the threat is no longer clearly defined, the National Security Strategy is

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<sup>1</sup> The results of this review form the foundation of the department’s strategic plan – satisfying a major portion of the Government Performance and Results Act (GPRA).

<sup>2</sup> The National Academy of Public Administration published a strategy for changing the role of human resource management professionals, *A Competency Model for Human Resource Professionals, Implementing Real Change in Human Resource Management, Phase II: Practical Applications*, 1996. It “focuses on how federal human resources (HR) professionals can prepare to meet the challenges and assume the roles that are required for them to become a strategic partner in the management of federal human resources – people.” p. xi.

<sup>3</sup> Appendix I provides a brief summary of this system.

evolving, the mission spectrum is expanding, technology is advancing rapidly and budget pressures are increasing; internally, the individual services are busy setting their courses for the future. As part of the planning process, the department must sort through this maze of uncertainty. Certainly, however, one of the bedrocks of this process will be a continuing dependence on the department's people for success.

On the other hand, a downward trend in the defense budget and the need to find funds for modernization in the department is expected to require increased accountability for the utilization of all resources. People-related expenditures account for about 50 percent of the defense budget. Consequently, greater interest in what the department is getting for these funds is valid and necessary. Leaders must seek a basis for making sound investment decisions related to human resources.

In the private sector, leaders are turning to human resource management professionals, as strategic partners, to help formulate and make these investment decisions. In this context, the *raison d'être* of human resource management is to maximize the value of an organization's human resources. If the department accepts this as true, "then task (work) design, selection, role assignment, development, performance appraisal, and compensation are not merely a set of service functions to be performed; rather, they are a set of strategies that can be adopted to change the value of human assets and, in turn, the value of the organization as a whole."<sup>4</sup>

Human value management establishes a perspective for considering the design and modification of human resource management policies and practices. Its objective is to increase the worth of an organization by creating value through and with people.<sup>5</sup> It views human resources as valuable organizational resources. It challenges leaders to make decisions affecting people based not only on their cost to the organization but on both their cost and the expected value of their contribution to achieving the strategy of the organization.

This, in turn, requires some type of human resource accounting (a technique that can be used in human value management). Human resource accounting can be used to:<sup>6</sup>

- Provide a framework to facilitate human resource decision making (pointing out the long-term impact and hidden cost of certain decisions).
- Quantify information about cost and value of people as organizational resources.
- Motivate commanders and other line leaders to adopt a human resource (value) perspective in their decisions involving people.

The challenge, then, for the human resource management community – the function responsible for designing policies and practices to support the business of the department as it will exist in the 21<sup>st</sup> century – is apparent. It must find a way to demonstrate that changes to the policies and practices it designs and implements add value to the organization – in terms of measures established by, and important to, the organization. This paper, developed in the context of human value management and

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<sup>4</sup> Eric G. Flamholtz, *Human Resource Accounting* (San Francisco, CA: Jossey-Bass Publishers, 1985), p. 15.

<sup>5</sup> Jac Fitz-enz, *Human Value Management: The Value-Adding Human Resource Management Strategy for the 1990's* (San Francisco, CA: Jossey-Bass Publishers, 1990), p. 45.

<sup>6</sup> Flamholtz (1985), p. 10.

building on human resource accounting, proposes a journey designed to improve the way an organization allocates resources to its human resources. Figure 1 provides a map of the journey. The journey is joined in progress.

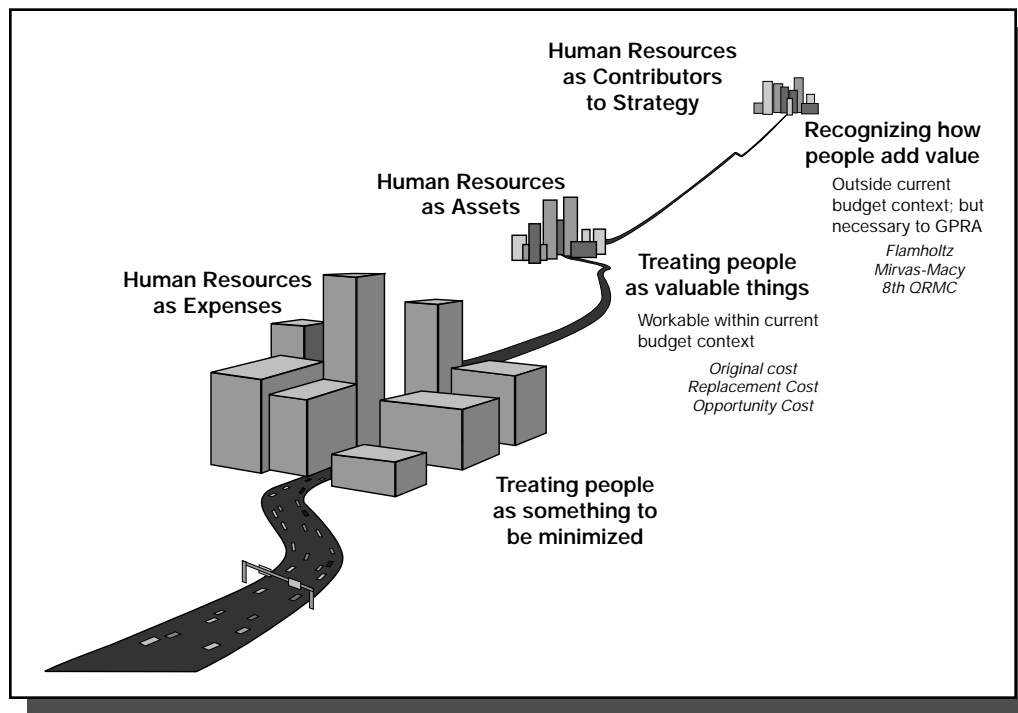


Figure 1— Overview of the Journey

In the past, and largely today, human resources have been viewed in the budget process primarily as **expenses**. This is familiar territory, very congruent with standard accounting techniques. Modest forays have been taken into a second area. This territory, though less familiar, is not located, conceptually, too far from the first. This second perspective views human resources as **assets** to the organization and, in line with the field of physical capital, attempts to place a value on these human assets. The second perspective extends the first by bringing a time dimension to bear that is clearly useful in more accurately portraying the costs and value of human assets <sup>7</sup> and permitting the calculation of a return on investment, for example. The quantitative techniques (historical cost, replacement cost, future compensation, etc.) to perform this calculation are fairly well developed, though infrequently employed in the department to make decisions. These two perspectives are predominately input-focused, understandably, because the current budget process <sup>8</sup> is, itself, predominately input-focused.

Even less exploration has been undertaken with regard to a third perspective – the human resource **contribution to organizational outcomes**. Despite the difficulty of

<sup>7</sup> To the extent that the benefit is considered, it usually falls in the category of the ability of the organization to attract quality personnel or to retain individuals with the requisite skills. Other behaviors – affected by changes in human resource management policies and practices or by allocation of resources to existing programs – although sometimes considered, are rarely quantified in terms of their effects on desired organizational outcomes.

<sup>8</sup> Indeed, most budget processes.

employing even the relatively developed second perspective within the current budget process, the “real” value of an asset – whether human or other, whether owned or unowned, whether quantitative or qualitative – is more accurately characterized by this third perspective. The third perspective is relatively unfamiliar country, but it holds out the promise of an explicit linkage in the budget process between the human resources input and the value it contributes to the organization’s strategy. It relies on conceptual frameworks developed by Flamholtz, Mirvas and Macy, and the 8<sup>th</sup> Quadrennial Review of Military Compensation. This perspective is outcome-focused.

Overall the journey takes us from treating people as something to be minimized (expenses), to treating them as valuable “things” (assets), to recognizing how people add value and managing those resources accordingly. The third perspective is not simply desirable, it is also necessary in the broader context required by the Government Performance and Results Act. Here inputs need to be explicitly tied to the desired outcomes of the organization, and the human resources represent in most cases a significant, if not the most significant, input affecting the outcomes. The ability to do this in the context of the current budget framework is limited, at best.

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## CHAPTER 2

# MEASURING THE VALUE OF HUMAN CAPITAL

The primary objective of the current investigation, therefore, is to move to a better understanding of “value” as it relates to human resources. What does this mean? The department declares without reservation, “People are our most valued asset.” But what do we mean by “valued” in that context, and is that a useful context for this investigation? Initially, this statement brings to mind issues related to how we treat service members and quality of life. However, what if we think of value as the worth of the capabilities the people contribute to the organization? In other words, as if people were *valuable* as well as valued, particularly in terms related to the organization’s strategic intent.

### Expenses

In the current resource allocation process, the department treats all expenditures related to people as costs. In economic terms, this implies that the department does not expect to reap benefits of these expenditures beyond the year in which the expenditures are made. Most would agree this is a distorted view – even though it is a fundamental premise of the way most organizations account for human resources. The department does, and should, expect expenditures for certain aspects of recruiting, accessing, and training, for example, to produce benefits in the future – over the useful life of the effects of programs in each of these processes.<sup>9</sup> To the extent benefits are expected beyond the current budget period (usually one or two years), these expenditures should be viewed as investments. This implies that methods other than expensing would be valuable to decision makers. Investments in capital assets (including human capital) are expressed in monetary terms (capitalized) and spread over the useful life of such expenditures (amortized). This allows a more accurate comparison of costs and benefits over time.

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### Assets – Valuing People

Accepting that people are assets implies that they are a part of the value of an organization. Human resources are a part of the capital of an organization – its human capital. This characterization highlights two features of human resources: that they have a “value” and that investments in them can change that value.<sup>10</sup> The questions then become how to measure the value and how to capture the impact of investment.

<sup>9</sup> Fitz-enz (1990), p. 224.

<sup>10</sup> Value as used here is the present worth of the set of future services the individual or group is expected to provide during the anticipated time they will remain in an organization. Flamholtz (1995), p. 172.

Regarding the first question, a variety of techniques can help an organization assess value in its move from an expense-based to an asset-based view of human resources. Some of these techniques are summarized in Appendix II. Although the most popular techniques derive monetary measures of asset value, they serve, to a greater or lesser extent, as stepping stones (with some modifications) on the path to a more accurate assessment. This paper suggests moving beyond the monetary measures by identifying and assessing the contributions of human resources to an organization's strategy (the third perspective); it is in the application of the techniques to the third perspective where further research is most needed.

Regarding the second, and related question, some of the costs associated with these resources are really investments<sup>11</sup> that seek to increase the value of the asset to the organization. Investments in human capital produce long term benefits – they build additional capacity. And they contribute to such desirable organizational characteristics as cohesion, collaboration, risk-taking, adaptability, reliability, and productivity. Some of these characteristics are more valuable, in terms of mission accomplishment, to certain parts of a large organization; consequently, where they need to be developed (and paid for) will depend on how much value they add to the desired outcome of that part of the organization.

Information technology provides a good analogy. Certain parts of the organization may require the most sophisticated, state-of-the-art computers to produce high quality graphics; other parts of the organization may need powerful mainframes to manage large data bases; still other parts require reasonably modern desktop PCs. The organization is not well served by providing the most powerful technology throughout the organization (because the overdesigned system is underutilized and not cost-effective where only desktop PCs are needed), nor by providing desktop PCs throughout the organization (because in certain parts of the organization, the additional cost provides the resources needed to accomplish the mission).

The wisdom of investment in new equipment or facilities can be assessed by calculating a return on investment, return on net assets, etc. A decision with no or negative return is dropped; even a positive return may not be enough to merit investment, depending on the opportunity cost of capital. Unfortunately, the department does not have such a convenient measure. In some areas, however, a similar calculation can be made – for example, acquiring a new management information system may be more “cost effective” than maintaining the old one. Although this calculation may not entirely show up in the budget, an informed decision can be made that takes into account the “return on the investment.” Armed with this information, decision makers can assess whether to acquire the new system or live with the consequences of not modernizing. These types of calculations are not routinely made for the human capital side of the enterprise.

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<sup>11</sup> For the purpose of this discussion, investments are funds spent which provide a potential economic (service) benefit in the future. In this context, these benefits include the skills, knowledge and experience that people possess. Expenses, on the other hand, are funds spent in the period in which benefits are expected to occur.



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The impact of changing the perspective of decision makers from viewing human resources only as expenses to viewing them as assets is significant. When organizations see human resources primarily as expenses, they are perceived as something to be minimized, especially when overall resource availability is declining. However, when organizations see human resources as assets, they are perceived as capabilities that support what the organization is trying to accomplish – capabilities that can be enhanced as necessary through investment. Investment in human resources through human resource management policies and practices is one of the most effective ways to influence this capability.

Although not all the information requires quantification, numerical information lends credibility to recommendations when such information is available. “There is no escaping numbers. . . . Top management cannot run a modern large corporation if it does not have numbers to work with.”<sup>12</sup> Information about human resources in monetary terms allows the development of more meaningful measures of the value of these resources to the organization. It puts this information in well-understood and accepted terms – on a par with other capital resources.

For example, a strategy of a particular organization may call for a reduction in the cycle time for handling requests for service in order to improve customer satisfaction (say, in an intermediate maintenance facility). Greater collaboration among the customer service team might be required to accomplish that outcome. The cost of training to develop the requisite interpersonal skills, the cost (or savings) of reorganizing to eliminate several levels of hierarchy, and the cost of implementing a new performance management system and variable pay program based on team performance could be assessed in the context of its expected effect on reductions in cycle time. This approach could be compared to other approaches for achieving the same ends (say, a new information management system, a reengineered process, or an improved technology – together with the changes required to make *these* approaches fully effective). In all cases, the question would be whether the cost of the change is worth the benefit in terms of reduced cycle time and, consequently, customer satisfaction. Such a comparison is impossible unless both the costs and the value of the investment is calculated for each option.

In cross-functional alternatives such as these, the value is likely to be characterized in different measures. The department could benefit from enhancing its ability to use information about the value of its human resources as opposed to continuing to use just the cost of people. Considering human resources as assets is a necessary first step for the department if it is to use the value, as well as the costs, of its people in decision making.

<sup>12</sup> Jac Fitz-enz, *How to Measure Human Resources Management* (New York, NY: McGraw-Hill, Inc., 1995), p. 15.

## Human Value Management: Valuing the Contribution People Make

The third perspective, one that seeks to capture the contribution human resources makes to the organization's strategic ends, benefits from three frameworks: a transformational model developed by Flamholtz, an economic-behavioral construct proposed by Mirvas and Macy, and the integrating process developed by the 8<sup>th</sup> Quadrennial Review of Military Compensation.

### Transformational Model

Different perspectives can be used to describe elements or processes that comprise human resource management within an organization and through which investments in human assets operate. The Von Glinow *et al.* model,<sup>13</sup> as described in the report of the 8<sup>th</sup> Quadrennial Review of Military Compensation,<sup>14</sup> is one such approach. This model's strength lies in the articulation of the relationships between the elements of an integrated human resource management system. The Von Glinow model indicates that the relationship flow starts with strategic intent. Flamholtz provides an alternative perspective. The appeal of the Flamholtz model, portrayed in Figure 2, is its elementary conceptual depiction of how human resources move through an organization and are transformed from an input into a valued output. The model also provides visibility into how decision makers can influence this transformation through the resource allocation process. It provides a framework for identifying and articulating the information needed to support resource allocation decisions. The model further supports the idea that both cost and value calculations for human resources are important.

Human resource management is a system designed to transform inputs (human resources) into outputs (human services). The inputs are people: individuals, groups, and the total "human organization." The *transformational* processes are managerial subsystems for acquiring, developing, allocating, conserving, utilizing, evaluating, and rewarding people. The output are the services provided by individuals and groups. These services constitute the value of people to an organization. Thus, the model suggests that the ultimate purpose of human resource management is to contribute to the value of an enterprise by *transforming* raw human inputs into valuable human outputs.<sup>15</sup>

<sup>13</sup> Mary Ann Von Glinow, Michael J. Driver, Kenneth Brousseau and J. Bruce Prince, "The Design of a Career Oriented Human Resource System," *Academy of Management Review*, Vol. 8, No. 1 (January 1983), pp. 23-31.

<sup>14</sup> 8<sup>th</sup> Quadrennial Review of Military Compensation, *Rewarding, Managing and Organizing People for the 21<sup>st</sup> Century: Time for a Strategic Approach – Part I: A Strategic Perspective* (Washington, DC: 8<sup>th</sup> QRMC, June 30, 1997), pp. 35-39.

<sup>15</sup> Flamholtz (1985), pp. 11-12.

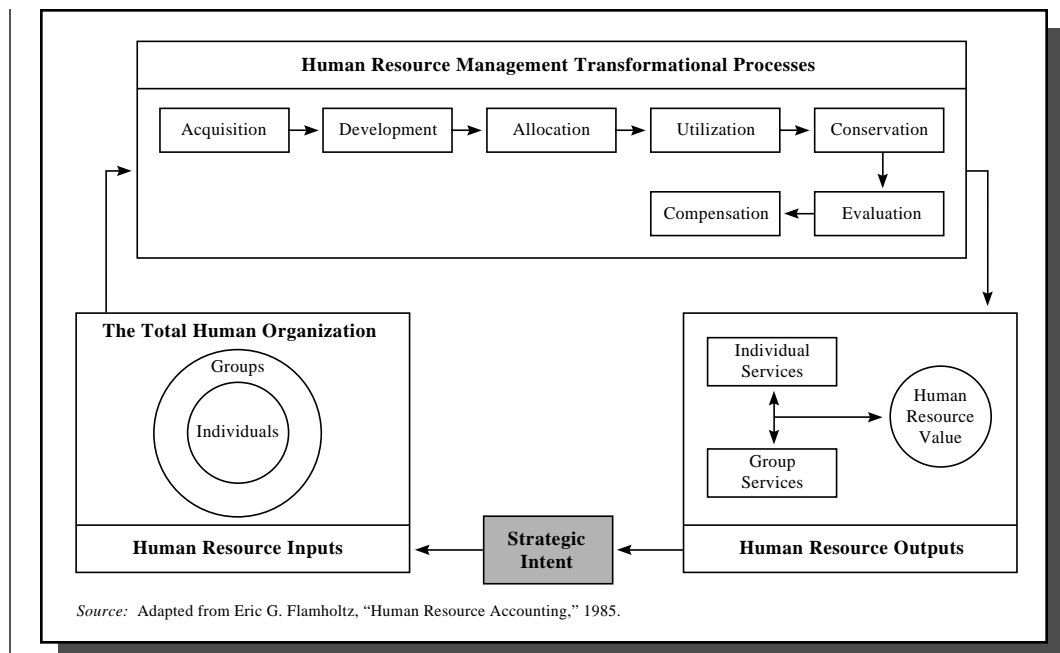


Figure 2 – An Input-Output Model of the Human Resource Management System

The Flamholtz model, with its focus on the human resource management system as a transformational process, brings a useful perspective to bear on human resource management decisions. Relationships among the elements of the transformational process imply a need for information that will enable leaders to make decisions about how to allocate resources among them and to measure their contribution toward building human capital. Within this framework, questions can be formulated in terms of how the allocation of resources to a particular element of the transformational process can improve organizational performance (in other words, how human resource inputs can more effectively be transformed into organizational outcomes). The transformational process is effected through policies and practices. So the allocation of resources to implement or modify policies and practices is, in effect, changing the transformational process.<sup>16</sup> Human value management and human resource accounting are steps toward providing this information in terms that present the decision maker clear options to achieve desired outcomes.

Another convenient aspect of the Flamholtz model is its similarity to the life cycle models used by the military services; in effect, the services currently think in terms of a framework that is easily translatable into a transformational process. Each of the elements of the transformational process of the Flamholtz model is discussed in Appendix III.

Every organization engages in two types of processes to accomplish its mission. First, the organization engages in a process that adds value to its inputs (human resources); the Flamholtz model describes this process for the human resource management function. Second, the organization uses these more capable human resources

<sup>16</sup> Said yet another way, the transformational process manifests itself in the organization's set of policies and practices.

as inputs to contribute to its mission. These processes are shown in Figure 3. In many organizations – and in the uniformed services, in particular – the process of adding value to human resources is a core process, and perhaps even a core competency. In effect, the organization’s “human resource improvement” process may be the single-most important component to accomplishing the desired end. On the other hand, even if an organization excels at “human resource improvement,” if these efforts are not effectively aligned with the organization’s strategy, human resources will not add as much potential value as they otherwise might. In addition if the link to strategy is not explicitly established, determination of the “value” of human resource interventions (in terms of their contribution to strategic ends) will be impossible. Linking the policies and practices affecting the transformation of human resources to the strategy of the organization is essential.

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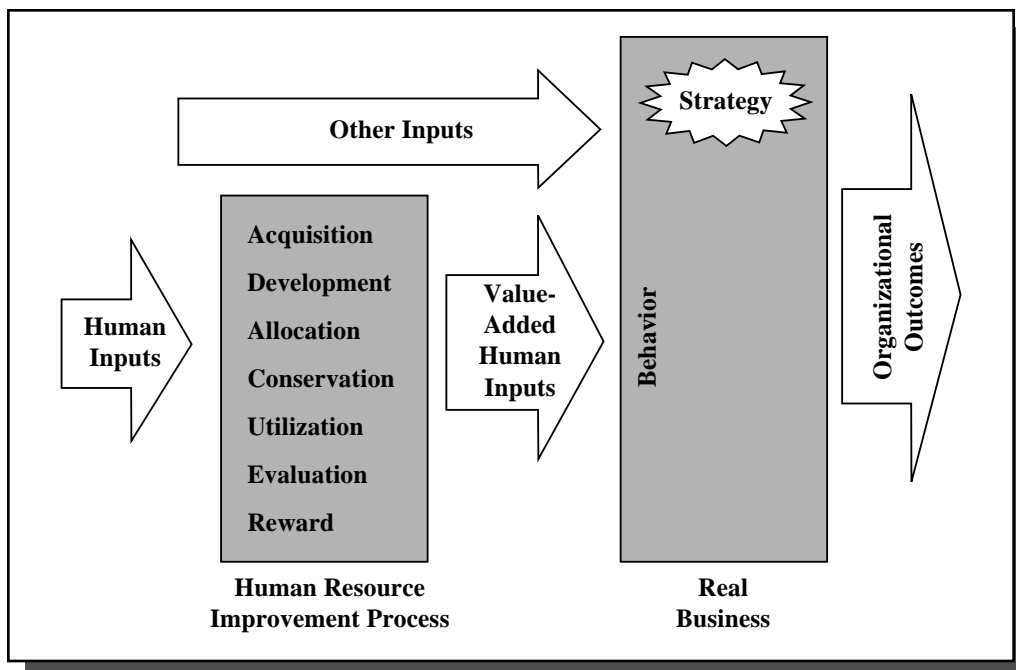


Figure 3 – The Value Trail

## Connecting Behaviors To Outcomes

As Figure 3 suggests, and as the 8<sup>th</sup> Quadrennial Review of Military Compensation emphasizes, behaviors are key to linking policies and practices to organizational outcomes. A hybrid **behavior-economic** human value technique, developed by Macy and Mirvis,<sup>17</sup> provides a means of measuring behaviors in economic terms; it lends a framework for linking behaviors to the organization’s budget. The premise of this technique is that certain behaviors produce performance outcomes that can be measured

<sup>17</sup> P. H. Mirvis and B. A. Macy, “Human Resource Accounting: A Measurement Perspective,” *Academy of Management Review* (April 1976), p. 79.

and valued in economic terms. Macy and Mirvis identified two sets of behaviors: <sup>18</sup> (a) those that reflect member participation in terms of membership and attendance at work <sup>19</sup> and (b) those that reflect performance on the job. For example, behaviors associated with participation include:

- Absenteeism.
- Turnover.
- Strikes.
- Tardiness.

Behaviors associated with performance include:

- Production under standard.
- Quality under standard.
- Grievances.
- Accidents.
- Unscheduled downtime and machine repairs.

Three criteria determine when to include a behavior in an organizational assessment:

- The behavior must be significantly affected by the work environment.
- The behavior must be measurable in terms meaningful to the outcomes desired by the organization.
- The behaviors must be mutually exclusive.

Application of this technique involves measuring the frequency of occurrence of the behavior in the organization and converting the rate of occurrence into a cost to the organization. Although the behaviors considered by Mirvis and Macy are inversely related to organizational effectiveness and efficiency, the role behaviors identified in the report of the 8<sup>th</sup> Quadrennial Review of Military Compensation <sup>20</sup> are directly related to organizational outcomes. The framework proposed by Mirvis and Macy can easily be extended to include this broader category. <sup>21</sup>

Within this framework, then, the budgeting process can account for investments in human assets that produce both current and future effects in two areas:

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<sup>18</sup> In this discussion, value for the organization is created in two ways. First, human resource management policies and practices are used to reduce the occurrence – and, therefore, the costs – of behaviors that are inversely related to organizational effectiveness and efficiency. Second, human resource management policies and practices are used to increase the occurrence of behaviors that are positively related to organizational effectiveness and efficiency – thereby, increasing the value of the organization to its customers and the consumers of its services.

<sup>19</sup> A recent RAND study, conducted for the 8<sup>th</sup> Quadrennial Review of Military Compensation, focused on a variety of behaviors including “joining” and “staying.” See Al Robbert, Brent Keltner, Ken Reynolds, Mark Spranca, and Beth Benjamin, *Differentiation in Military Human Resource Management* (RAND, MR-838-OSD), 1997, pre-edit copy, publication forthcoming.

<sup>20</sup> Some examples of role behaviors include: collaboration, adaptability, risk-taking, team work, etc.

<sup>21</sup> For a discussion of the empirical data bearing on the effect of human resource management policies and practices and a strategic approach to human resource management on organizational performance, see the working paper “Quantifying the Benefits of Changing the Way Organizations Reward, Organize and Manage People” in this volume.

- Reducing the occurrence of behaviors that are inversely related to organizational outcomes (increase efficiency).
- Increasing the occurrence of behaviors that are directly related to organizational behaviors (increase effectiveness).

For example, an organization might consider offering incentives (making an investment) directed at rewarding people for creativity, innovation and risk-taking. In effect, the incentives would be designed to align behavior with the strategy of the organization. However, because the line of sight between performance and reward would become more visible, these same people would be less likely to turnover, exhibit tardiness or be absent from work. Thus, the incentives would also reduce behaviors that work counter to desired organizational outcomes. Ideally, both of these results should be captured in the analytic framework of the budget process to ensure that decisions makers can effectively allocate resources. This is how human value management and human resource accounting can begin to demonstrate that changes to human resource management policies and practices can add value to the organization.

*... changes to human resource management policies and practices can add value to the organization.*

## Linking Behaviors to Strategies

The third framework addresses the need to identify the explicit behavior needed to support particular strategies and aligning those behaviors to achieve desired organizational outcomes. The report of the 8<sup>th</sup> Quadrennial Review of Military Compensation provides the operational means of establishing and sustaining the alignment required. This alignment is accomplished by specifying the set of behaviors and outcomes needed to bring about a chosen strategy and, then, making strategic choices along dimensions that characterize the human resource management system.<sup>22</sup> The choices are evaluated iteratively, with the aid of the human resource management strategic choice model,<sup>23</sup> to understand the trade-offs required to get the best match between strategic choices and desired outcomes. Based on the final set of strategic choices, the organization designs specific policies and practices unique to its work culture and environment. The result is a set of policies and practices vertically aligned with the strategy of the organization and horizontally aligned with each other. The policies and practices produce the set of desired behaviors which, in turn, bring about the outcomes.

It is likely that the mix of human resource policies and practices employed to increase effectiveness and efficiency is different for an organization using a strategy of innovation compared to one using a strategy of quality improvement.<sup>24</sup>

<sup>22</sup> These dimensions also underlie the elements that comprise Flamholtz' transformational process.

<sup>23</sup> Described in 8<sup>th</sup> Quadrennial Review of Military Compensation, *Rewarding, Managing and Organizing People for the 21<sup>st</sup> Century: Time for a Strategic Approach – Part II: A Strategic Approach* (Washington, DC: 8<sup>th</sup> QRM, June 30, 1997), Chapter 6.

<sup>24</sup> Wayne F. Cascio, *Costing Human Resources: The Financial Impact of Behavior in Organizations* (Boston, MA: PWS-KENT Publishing Company, 1991), p. 293.

Table 1 – Outcomes and Behaviors for Different Organizational Strategies <sup>25</sup>

ORGANIZATIONAL STRATEGY	INCREASE EFFECTIVENESS	IMPROVE EFFICIENCY
<i>Innovation</i>	<i>Interdependent</i> <i>Creative (developing new ideas and applying innovative approaches)</i> <i>Self-developing</i> <i>Trial and error problem solving</i> <i>Seizing opportunity and taking responsibility without hesitation</i> <i>Adaptable (flexible to new circumstances)</i> <i>Risk-taking</i> <i>Openness (sincere and candid in discussions)</i> <i>Aggressive, long-term learning (especially about business)</i>	<i>Reduce controllable turnover</i> <i>Minimize absenteeism</i>
<i>Quality</i>	<i>Goal setting</i> <i>Self-improvement</i> <i>Meet and exceed standards</i> <i>Concern for production and delivery processes</i> <i>Commit to organizational goals</i>	<i>Minimize turnover</i> <i>Minimize absenteeism</i> <i>Minimize tardiness</i>
<i>Customer Service</i>	<i>Broad-mindedness (accepting different viewpoints and opinions)</i> <i>Considerate (being caring and kind)</i> <i>Courteous (respect for individual dignity)</i> <i>Diligence</i> <i>Forgiving (understanding when errors occur)</i> <i>Well organized</i> <i>Moral integrity (honorable and following ethical principles)</i> <i>Initiative (seizing opportunity and taking responsibility without hesitation)</i>	<i>Remove barriers to attract repeat customers (avoids cost of finding a new customer)</i> <i>Participation in design process to reduce rework</i> <i>Exercise choice in benefits</i>
<i>Least Cost</i>	<i>Short-term focus</i> <i>Independent</i> <i>Diligence (working long and hard to achieve results)</i> <i>Cautiousness (minimizing exposure to risk)</i> <i>Obedient (comply with directions and conform to rules)</i>	<i>Minimize training and development requirements</i> <i>Reduce dysfunctional turn over</i> <i>Low absenteeism</i> <i>Low risk-taking</i> <i>Economic (thrifty and careful in business)</i>
<i>Military Effectiveness</i>	<i>Obedient (comply with directions and conform to rules)</i> <i>Diligence (working long and hard to achieve results)</i> <i>Moral integrity (honorable and following ethical principles)</i> <i>Self-improvement</i> <i>Meet and exceed standards</i> <i>Moral and physical courage</i> <i>Adaptable (flexible to new circumstances)</i> <i>Build cohesion</i>	<i>Economic (thrifty and careful in business)</i> <i>Maintain fitness and vigor</i>

<sup>25</sup> Table modified from Cascio, p. 293.

The 8<sup>th</sup> Quadrennial Review of Military Compensation considered five such organizational strategies. For each of these five strategies, the chart below suggests some of these different behaviors in the context of their primary impact on organizational effectiveness and efficiency.

Overall, this process (building on the Flamholtz and Mirvas and Macy frameworks) allows the organization to go beyond focusing on producing human resource management outputs to focusing explicitly on the contribution of these outputs to the achievement of organizational outcomes.

*Overall, this process . . . allows the organization to go beyond focusing on producing human resource management outputs to focusing explicitly on the contribution of these outputs to the achievement of organizational outcomes.*



## CHAPTER 3

# BUDGET TIED TO STRATEGY: A TOOL FOR BUILDING HUMAN RESOURCE VALUE

*. . . the question becomes whether the return – the benefit in terms of the organization's strategic ends – is worth the cost.*

The overall cost of people is visible in the department's budgeting system – major budget categories are devoted to it. However, these costs, particularly the cost of military personnel, are, generally, not allocated to specific organizations. To the extent that the account displays of some major programs contain elements that reflect the direct cost and, to a lesser degree, the indirect cost of the people, the costs are so aggregated that there is no way to link them to the organization's desired outcomes. Finally, all of these costs are currently treated as expenses. However, some of those costs are related to developing the capability of people for the future and could, and should, properly be viewed as investments that are associated with an expectation of a future return. In addition, these investments are being made, largely if not solely, to achieve organizational outcomes. In that context, the question becomes whether the return – the benefit in terms of the organization's strategic ends – is worth the cost.

If the budgeting process considered the effects of these investments, a more accurate picture of the relationship between the costs of a program and the expected benefits would emerge. This picture would better support management decisions aimed at selecting alternative designs or interventions for the human resource management system that fully develop the capability of service members – now and in the future. In addition, such an approach would provide a clearer line of sight between management decisions and the strategy of the organization by tying the decisions to desired organizational outcomes.

“When an organization integrates its strategic planning process with its budgeting process, it can increase efficiency and effectiveness even more.” <sup>26</sup>

To be effective, human value management must become part of the organization's decision-making process.

<sup>26</sup> Phillip Blackerby, “Strategic Planning: An Overview for Complying With GPRA,” *Armed Forces Comptroller* (Winter 1994), p. 20.



## **APPENDICES**



# APPENDIX I

## OVERVIEW OF THE PLANNING, PROGRAMMING AND BUDGETING SYSTEM

A brief description of activities in each phase of the planning, programming and budgeting system is included here to serve as a point of departure for what might be done in the future. Although the examples focus on human resource management, these considerations receive a relatively modest amount of attention in the overall process.

*Planning* establishes the mission, vision, and strategies for the department. The results of planning are published in the Defense Planning Guidance (DPG). The Defense Planning Guidance is a fairly large document that identifies the services' goals, performance targets, macro-resource limits and high-level policies. Examples include ceilings for total personnel and officers, training-related readiness requirements, quality goals for recruiting, and promotion objectives related to equal opportunity. Broad fiscal guidance allocates budget authority to the services over the planning horizon. Services participate in the development of the Defense Planning Guidance but do not have veto power. Fiscal guidance is formulated almost exclusively at the Department of Defense level.

*Programming* occurs primarily at the service level and specifies, within the Defense Planning Guidance and fiscal guidance, desired service programs and their associated resource requirements. Often, resource requirements exceed allocated budget authority and prompt a request for increases in planned resources. The result of this process is the Program Operating Memorandum (POM). To determine the human resource requirements, services compile personnel numbers based on systems and organizations to be manned in the force structure for each service. **Average** cost per personnel category (enlisted, officer, job specialties) are used to develop personnel accounts and to distribute costs across a number of program elements in appropriation accounts. Program Operating Memorandum schedules specifically show recruiting plans, training requirements, and other personnel-related information. The department reviews the Program Operating Memorandum to confirm that resource allocations are reasonable. The Department of Defense modifies the Program Operating Memorandum through Program Decision Memoranda (PDMs).

*Budgeting* focuses on the first two years of the Future Year Defense Plan and is compiled by the services in their Budget Estimate Submission. The budget expresses the resource requirements in manpower and dollars, classified by appropriation account. The budget is reviewed by the department which publishes Program Budget Decisions (PBDs), as required, to change service budgets. It is consolidated by the department and sent to the President for submission to Congress.

The budget can be a mechanism of effectiveness – achieving certain results (outcomes) in the organization – and/or efficiency – doing whatever is done at least cost or getting the most out of a given level of expenditures.<sup>27</sup> If the department wants to make its people more visible in the current process, it must treat its people (human resources) as an asset. This perspective will require the department to focus attention on both the cost and the value of its human resources to the department and to its subunits. As part of the transition to a more strategic approach to rewarding, managing and organizing human resources, the department might take some or all of the following actions related to selected personnel expenditures:

- Develop accurate cost of people and organizational interventions related to them.
- Amortize certain capital costs over the service life of its human resources.
- Show the costs and benefits of investing in people as assets to the organization.
- Measure performance of people at different levels of investment for the purpose of “performance budgeting.”
- Use the budgeting process as a tool for investing in people to achieve organizational outcomes.

Budgeting is the final process in strategy formulation in an organization. It captures the financial implications of its decisions. If human resources are important to the successful prosecution of the department’s strategy (which all would admit they are), they require the same rigorous consideration within the planning, programming and budgeting system as the other inputs to the organization.

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<sup>27</sup> Idea modified from Aaron Waldevsky and Naomi Caiden, *The New Politics of the Budgetary Process* (New York, NY: Addison-Wesley Educational Publishers Inc., 1996), p. 264.

## APPENDIX II

# HUMAN RESOURCE ACCOUNTING

This appendix briefly describes several human resource accounting concepts and methods for computing cost and values, with the focus on how they might be applied to the value side of the ledger. Although these models or variations to them can help allocate resources within the planning, programming and budgeting system process, they do not provide the full answer to human value management. We found no model capable of doing that. The models described below provide pieces of the puzzle – a puzzle whose assembly requires further conceptual and operational development. We suggest this development will rely heavily on the techniques described in this appendix, extended and modified to apply to the third perspective described in the paper.<sup>28</sup>

### Human Resource Costs: Concepts and Methods

#### Original Human Resource Cost Method

One of the more common methodologies, the Original Human Resource Cost Method (also called Historical Cost Model) centers around the amount expended to make a person a member and/or develop them from inside the organization. Figure 3 displays the categories of expenditures which include recruiting, selection, hiring, placement, orientation, on-the-job training, trainer's time costs, lost productivity during training, and development or learning. These categories represent two types of cost: acquisition costs which include the direct cost of recruitment, selection, hiring, and placement (or the indirect cost of promotion or hiring from within); and learning development costs which include the direct costs of formal training, orientation and on-the-job training; and the indirect costs for the time of trainers and lost productivity during training.<sup>29</sup>

There are two distinct advantages of this method. First, it is the same method used for other assets because it represents the cost to the purchaser. Second, it is simple and inexpensive, and it can be implemented in a short period of time.

The basic framework for developing historical costs is portrayed in Figure 4.

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<sup>28</sup> The "value of human resources" discussed in this appendix refers primarily to a description in terms of something that can be monetarized. The techniques for calculating this value have not been (but could be) applied to quantifying the contribution (monetary and non-monetary) of human resources to strategic ends.

<sup>29</sup> Kenneth A. Klase, "Accounting for Human Resource Development In The Public Sector," *International Journal of Public Administration*, Vol. 19 No. 5 (1996), pp. 678-679.

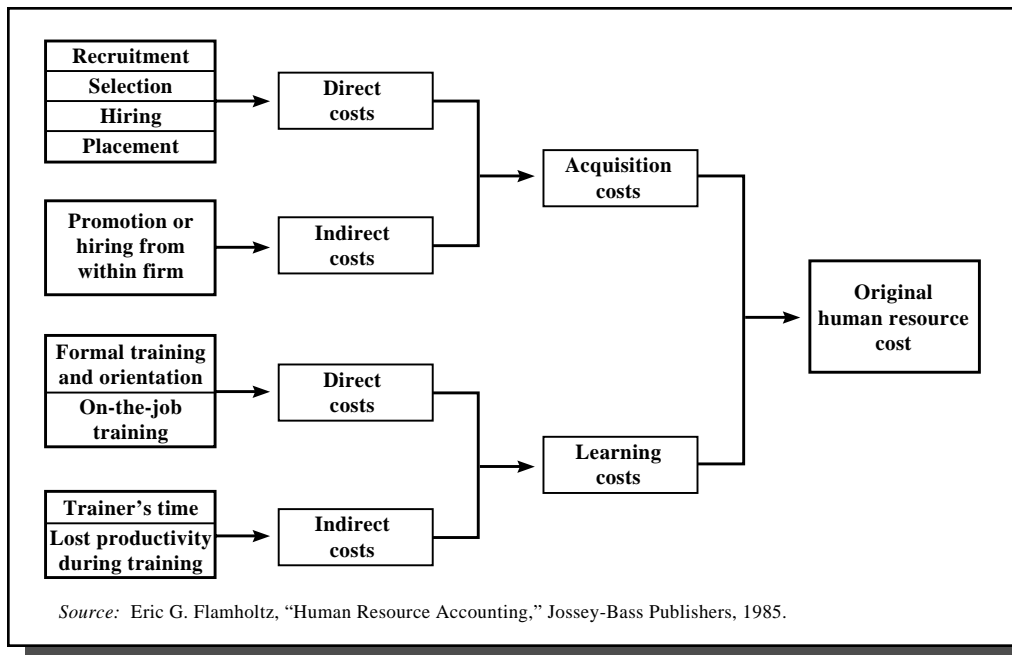


Figure 4 – Model for Measurement of Original Human Resource Cost

## Replacement Cost Method

The Replacement Cost Method centers on what it would cost to replace people who are currently members of the organization. Included are both position replacement costs (those associated with a specific position) and the personal replacement cost (those associated with replacing a member with one who provides equivalent services). Replacement costs include acquisition costs (same as above), learning or development costs (cost to bring the replacement to the current level of competence) and separation or termination costs (separation pay and estimated monetary losses during the time the position is being filled).

The basic framework for developing replacement costs is portrayed in Figure 5.



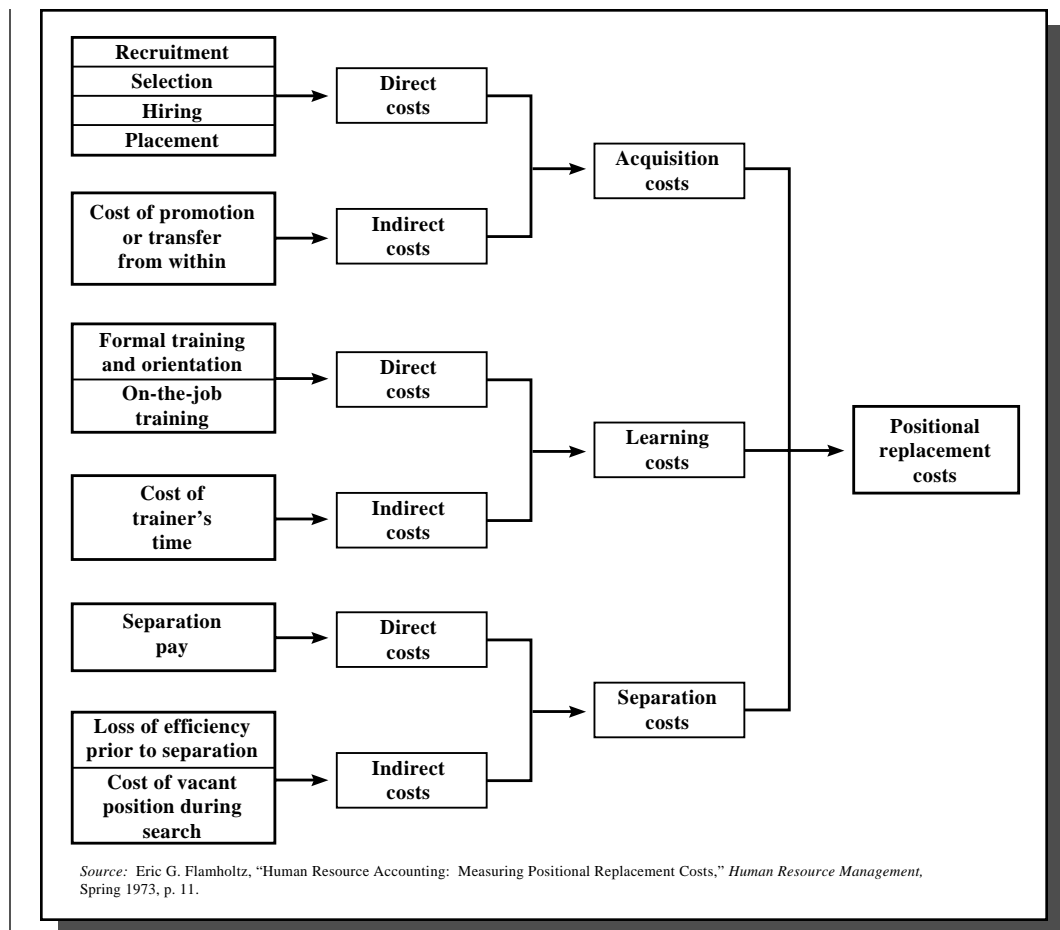


Figure 5 – Model for Measurement of Human Resource Replacement Cost

## Human Resource Value: Concepts

The calculation of human resource value will require more tailoring and creativity than the calculation of human resource cost before it can be applied in the department. However, the potential for this information to contribute to decisions about people makes the effort worthwhile. Both monetary and nonmonetary methods of determining human resource value exist. This section discusses the theoretical framework for the nature and determinants of the value of people to organizations. The next section briefly discusses methods for calculating monetary and nonmonetary value.

The theoretical framework is called human resource value theory. Human resource value is defined as the present worth of a person's expected future service. The concept can be applied to individuals, groups and the total organization.

## Flamholtz Model of Individual Value

The value of a person depends on whether they render or withhold their services. Therefore, from the organization's perspective, the likelihood of realizing a person's service is less than certain. This highlights two aspects of an individual's value: (1) the *expected conditional value* which is the amount the organization *could* realize if the person maintains membership in the organization throughout the period of his or her useful service life and (2) the *expected realizable value* is the amount of service actually expected after accounting for the person's probability of turnover. The second aspect is closest to the notion of economic value and is, therefore, most important for an organization to consider. This aspect, developed by Flamholtz, is portrayed in Figure 6.

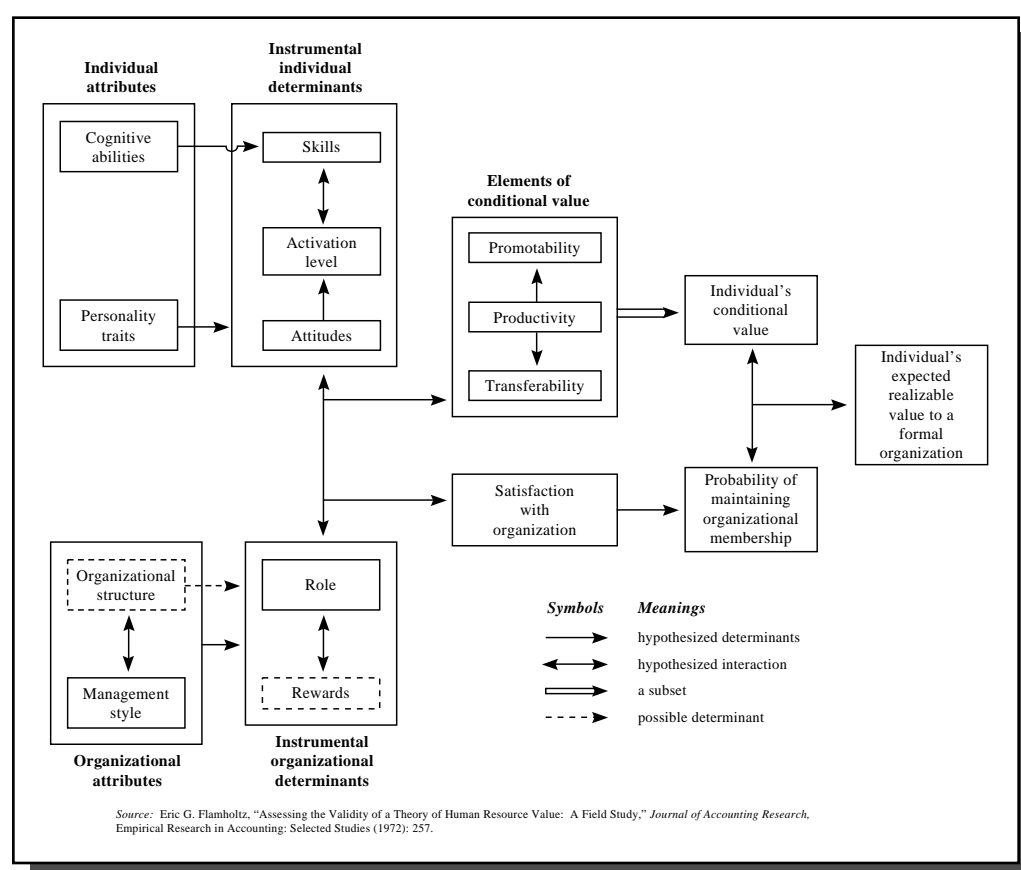


Figure 6 – Revised Model of the Determinants of an Individual's Value to an Organization

In the Flamholtz model of an individual's value to an organization, the individual brings certain attributes to the organization: cognitive abilities, such as aptitude; and personality traits, such as the need for achievement. These attributes are the source of work-related value determinants: the person's skills, activation level (motivation) and attitudes. However, an individual's value to the organization is in relation to the roles (the set of behaviors expected of a person who occupies a specified position) he or she can or will potentially occupy. Organizational attributes of structure and management

style determine the roles and rewards available within the organization, and these organizational determinants<sup>30</sup> interact with the individual determinants to produce the elements of conditional value (productivity, promotability, and transferability)<sup>31</sup> and the person's satisfaction with the organization. Satisfaction and conditional value produce the person's realizable value.<sup>32</sup>

The model has a number of measurement implications. It shows that an organization should measure both a person's conditional (potential) value as well as the expected realizable value that accounts for the probability of turnover. People with the greatest realizable value are worth more to the organization. In effect, the difference between the potential value of an individual and his or her realizable value represents the amount the organization might want to invest to reduce turnover to zero. The model also shows that satisfaction is an important influence on whether a person remains in the organization and, therefore, should be measured and reported to leadership. Another measurement implication is that a person's worth is not solely a function of personal attributes. It is affected by a set of interacting economic, social, and psychological variables. As the framework shows, the value of a person is a function of personal attributes and the organizational role assignment. Lastly, the model includes in value the idea of transferability. This becomes very important if the department moves to flatter organizations where vertical promotions are limited.

### Likert and Bower Model of Group Value

*The value of groups* is an important consideration for organizations, especially as teams and team work take on greater prominence. The basis of this focus is that groups carry out the processes within an organization that produce products or services. The framework for group value, developed by Likert and Bower, is shown in Figure 7.

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<sup>30</sup> As documented in the 8<sup>th</sup> Quadrennial Review of Military Compensation, *Rewarding, Managing and Organizing People for the 21<sup>st</sup> Century: Time for a Strategic Approach* (Washington, DC: 8<sup>th</sup> QRMC, June 30, 1997), the human resource management system can or should communicate and deliver the organizational determinants to individuals through the policies and practices with its components of organizational structure, personnel management (management or leadership style) and compensation (rewards). Resource allocation affects the ability to implement policies and practices that are aligned to produce the desired outcomes of the organization.

<sup>31</sup> **Productivity** refers to a set of services an individual is expected to provide while occupying his present position. A synonym for productivity is performance. **Transferability** is the set of services an individual is expected to provide if and when he transfers to other positions at the same position level in a different promotion channel. **Promotability** represents the set of services the individual is expected to provide if and when he occupies higher level positions in his present or different promotion channels.

<sup>32</sup> Eric G. Flamholtz, "Assessing the Validity of a Theory of Human Resource Value: A Field Study," *Journal of Accounting Research, Empirical Research in Accounting: Selected Studies* (1972), p. 257.

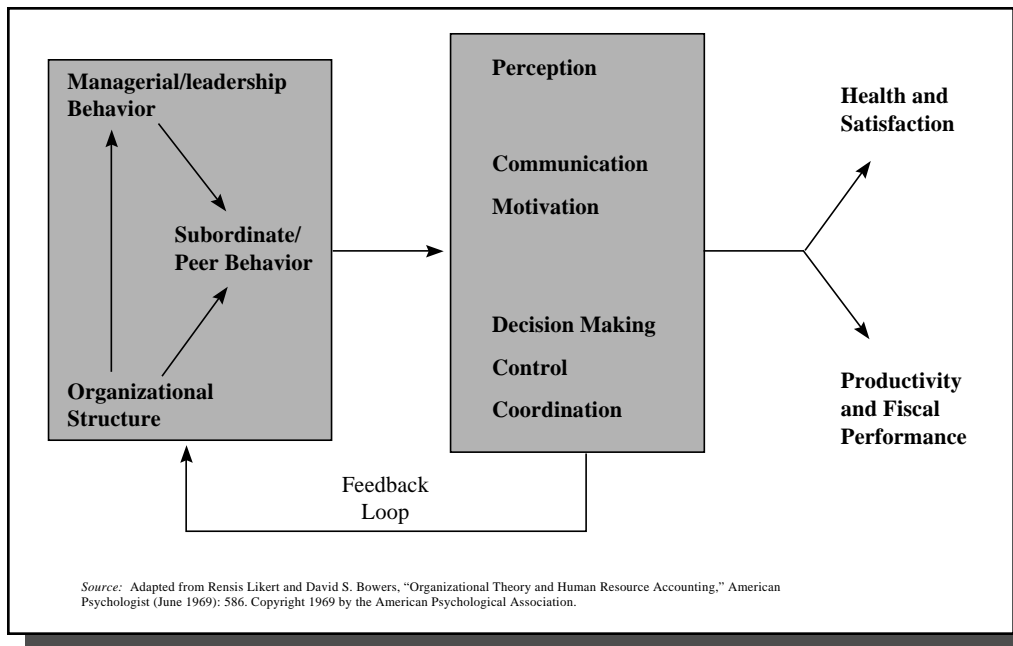


Figure 7 – Model of Determinants of a Group's Value to an Organization: Schematic Relationships among Causal, Intervening, and End-result Variables

The Likert and Bower model examined the determinants of group value. It is intended to represent the productive capability (value) of any enterprise or unit within it. The organizational outcomes that enable the department to achieve its missions are produced by units and task forces, not individuals. Understanding the determinants of the value of these groups should prove useful to the department.

The model depicts the relationship of three variables – causal, intervening, and end-result (similar to the term “outcomes” in the 8<sup>th</sup> QRMC report). The value of any group is the worth of the end-results that the group is expected to produce.

- **Causal variables** are independent variables that can be purposely altered by the management of an organization and that determine the course of events within the organization. A variable excluded, for example, is general business conditions. There are two types of causal variables: **organizational structure** – relationships among organizational roles – and **managerial/leadership behavior**. Managerial/leadership behavior refers to the actions of leaders that influence group effectiveness. There are four components of managerial/leadership behavior.
  - Support involves behavior that improves another's feeling of personal worth and importance.
  - Team building involves behavior that encourages group members to develop close, mutually satisfying relationships.

- Goal emphasis is behavior that motivates excitement for meeting the group's goals or achieving excellent performance.
- Work facilitation involves behavior usually present as processes that enable the achievement of goals, including activities like scheduling, coordinating, and planning and allocation of resources such as tools, materials, and knowledge.
- **Intervening variables** reflect the internal state, health and performance capabilities of the organization, that is, the loyalties, attitudes, motivations, performance goals, and perceptions of all members and their collective capability for effective actions.
- **End-result variables** are the dependent variables which reflect the results achieved by that organization, such as productivity, cost, scrap loss (increased efficiency), growth, share of the market and earning.

The model simply links the causal variables through intervening variables to end-result variables. A key insight provided by the model is that an organization can influence the causal variables through an investment in its leadership/management structure (style, strategy) and in its organizational structure and its group processes (reengineering). These changes influence the internal work culture (way work is done) affecting loyalties, attitudes, motivations, performance goals and perception of all members and their collective capability for effective action, communication, interaction, and decision making. Through these intervening variables, work culture influences the desired end-results – workforce health and satisfaction, and productivity and mission performance. The human resource management strategic choice model developed by the 8<sup>th</sup> Quadrennial Review of Military Compensation, though significantly more elaborate, exhibits this same general form.

Empirical support for the model exists. Likert and Bowers showed that participative management yields more favorable attitudes as expressed in such intervening variables as confidence and trust in superiors, ease and accuracy of communication, and group loyalties. The correlation between performance cost and managerial behavior range from -0.48 to -0.58 showing that the better managerial behavior is perceived to be, the lower the performance costs.<sup>33</sup> Likert and Pyle showed association between performance cost and managerial behavior where managerial behavior was assessed by three indices: managerial support, managerial team building, and managerial work facilitation.<sup>34</sup>

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<sup>33</sup> Rensis Likert and David S. Bowers, "Organization Theory and Human Resource Accounting," *American Psychologist* (June 1969), p. 586.

<sup>34</sup> Rensis Likert and William Pyle, "Human Resource Accounting: A Human Organizational Measurement Approach," *Financial Analysis Journal* (January/February 1971), pp. 75-84.

## Robinson Participative Involvement Model

Robinson proposed a constructive participative involvement approach which relies on participative goal settings by departments and involves all levels of the organization in the decision making, performance appraisal, and goal achievement.<sup>35</sup> The development of human resources as assets is shown by:

- Continued concern by everyone for the attainment of profitable objectives.
- Increased confidence and trust in their own and their superior's attitude to perform effectively.
- Reduced turnover and grievance among rank and file.
- The self-imposition of higher quality and performance standards by subordinate departments, group and individuals.
- Increased pride of accomplishments in maintaining a competitive position in the industry over the long term (results in containing for security and increased earnings).
- Reduced need for permission, inspections and imposition of work standards with a corresponding reduction of overhead expenses.

## Myers and Flowers Flow-Process

Another model proposed by Myers and Flowers, measures the conversion of human resources into job behaviors.<sup>36</sup> The dimensions of human assets follow a flow-process that leads to job performance as follows:

Knowledge ⇒ Skills ⇒ Health ⇒ Availability ⇒ Attitudes ⇒ Job Performance

## Human Resource *Value*: Methods

### Valuation Methods: Individual – Monetary

The first valuation method, the *stochastic rewards model*, is a very accurate way to compute the value of human resources and conceptually underlies all other methods. It measures a person's value to the organization by determining their value based on the probability they will transition through a defined set of service states in the hierarchy of the organization. The organization uses the following steps to develop the model.

- Define the mutually exclusive states an individual may occupy in the organization.
- Determine the value of each state to the organization.

<sup>35</sup> B. A. Robinson, "An Approach to Human Resource Accounting," *Cost Management* (May-June 1974), pp. 26-32.

<sup>36</sup> M. Scott Myers and V. S. Flowers, "A Framework for Measuring Human Assets," *California Management Review* (Summer 1974), pp. 5-16.

- Estimate a person's expected tenure in an organization.
- Find the probability that a person will occupy each possible state at specified future times.
- Discount the expected future cash flow to determine their present value.

The greatest challenge to using this model is defining and valuing the various states that an individual might pass through as a member of an organization.

*Original cost of human resources* as a surrogate for the value of people has the primary benefit of being consistent with the use of cost as a surrogate of value in conventional accounting. It is possible to get an accurate measure of a person's acquisition costs. Its primary failing is that the cost to acquire a person is not likely to be a good estimate of his or her value today or at any time after the acquisition date.

*Replacement cost of human resources* as a surrogate provides a value for people that is more relevant for input to investment decisions than original cost. It still, however, falls short of a complete assessment of value.

*Compensation* has been suggested as a surrogate for an individual's value. It is the price the organization is willing to pay to obtain the individual's service. However, compensation may not reflect an individual's actual value or his or her current or future productivity. Performance measures that are often used as a basis of compensation might not include all the dimensions of his or her value. The more accurate the performance measures, the more effective this surrogate becomes. This measure is particularly ineffective in an organization as large and diverse as the military when it employs a largely "one-size-fits-all" compensation system (with little variation in terms of how individuals with different skills move through the pay table) and in which less than half of pay increases are attributable to performance and annual increases are provided across the board. Such a system largely obviates any insight that would be gained by attempting to value different kinds of human resources (because everyone would have the same value).

*Opportunity costs* measure the value of a person in an alternative position or the value not realized by the organization because it assigned the individual to one job as opposed to another.

### Valuation Methods: Group – Monetary

A group may be thought of as a collection of more than one person. However, this discussion focuses on a group as a collection of people who share an identity. This collection of people works together to produce performance results for an organization. The value of a group is not always the sum of the value of its individual members. One reason for the difference is caused by synergy – the cooperative action of individuals that result in total effects that are greater than the sum of the effects of the individuals acting independently.<sup>37</sup> Measuring the value of a group entails determining the net present value of the expected future contribution of the group to the organization.

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<sup>37</sup> Flamholtz (1985), p. 172.

There are a number of ways to think about groups. Groups may reflect their organizational classifications such as divisions, departments, and plants. Another way to think of groups is as expense or profit centers depending on how an organization measures their inputs and outputs. In an **expense center**, inputs are measured in monetary terms, but there is no attempt to measure outputs in a similar manner. In **profit centers**, both inputs and outputs are measured in monetary terms. The valuation of groups in an organization is an area in which relative little research has been done. No normative model or framework exists. Approaches for valuing groups when they are viewed as profit centers and expense centers are discussed below.

The stochastic rewards model discussed earlier can be applied to profit centers. Three approaches exist for valuing profit centers: the economic value approach, the unpurchased goodwill method, and the human organizational dimensions.

- **The Economic Value Approach** involves calculating the value of a group by determining the present worth of the future services that it will provide in an organization. This requires forecasting the total future earnings of an organization, discounting the earnings to determine the present value, and allocating a portion to human resources based on their relative contribution. A relative measure of the contribution of human resources is the ratio of investments in human resources and total resources. As an example, suppose a privatized maintenance depot had \$10 million in total assets including \$5 million in human assets. The depot forecast that its future revenue, discounted to present worth, will be \$24 million. Human resources constitute one-half of the depot's assets. One-half of its discounted future earnings will be allocated to human resources. This approach would conclude that the value of the depot's human assets is \$12 million.
- **The Unpurchased Goodwill Method**<sup>38</sup> involves the argument that the best way to show the effects of unowned resources (including human resources) is to compare the income an enterprise earns to the average of income of enterprises within its industry and to allocate any differential to the unowned resources. Two types of assets are present in the enterprise, owned and operational. This method assumes that unowned resources (operational assets) are not reflected on the balance sheet of an enterprise. It can be argued that operational assets are primarily made up of human resources.<sup>39</sup> This method concludes that human assets are the source of differential earnings rates. The primary use envisioned for this method is external reporting. All calculations

<sup>38</sup> The developer of this method has a somewhat unique view of assets that might be useful when exploring how the department might apply this method. "Assets are scarce resources (defined as services grouped by and referred to as agents), operating within the entity, capable of being transferred by forces within the economy, and expressible in terms of money, which have been acquired as the result of some current or past transaction, and which have apparent ability to render future economic benefits." He distinguishes between owned assets – those scarce resources legally or constructively owned by the entity that have a separate determinable market value and could be directly used or converted for payment of a debt, and operational assets which are scarce resources operating in the entity that is not owned. This method is cited in Roger H. Henderson, *Accounting for Human Assets*, Occasional Paper No. 14 (East Lansing, MI: Bureau of Business and Economic Research, Michigan State University, 1964), pp. 4-5.

<sup>39</sup> Flamholtz (1985), pp. 214-215.



are based on earnings from the previous year. To apply this method, an average rate of income is established for an industry of interest using the ratio of net income to owned assets. An expected income is also established for each enterprise in the industry. The expected income is compared to actual income for the previous year and an income differential and rate differential (ratio of income differential to owned assets) are computed. The rate differential and the income differential are multiplied to yield the capitalized value of human assets in the enterprise. Table 2 and Table 3 illustrate the method.

**Table 2 – The Medical Industry**

FIRMS				
	A	B	C	TOTAL INDUSTRY
<i>Total Owned Assets</i>	100,000	200,000	300,000	600,000
<i>Net Income</i>	20,000	10,000	30,000	60,000
<i>Ratio of net income to total owned assets</i>	20%	5%	10%	10%

**Table 3 – Calculation of Human Asset Value for Medical Firms**

FIRMS			
	A	B	C
<i>Total owned assets</i>	\$100,000	\$200,000	\$300,000
<i>Normal net income at 10%</i>	10,000	20,000	30,000
<i>Actual net income</i>	20,000	10,000	30,000
<i>Variance</i>	10,000	(10,000)	0
<i>Human assets (capitalized at 10%)</i>	100,000	(100,000)	0

This method has a number of notable limitations. First, it does not recognize a base value of human resources needed to carry out “normal” operations. Second, it only uses actual income from the previous year. The second limitation can be overcome using forecasts of future earnings which might be more relevant to management decisions.<sup>40</sup>

- **The Human Organizational Dimensions Method** operates on the premise that the value of human resources should be determined as it is for other resources. This involves calculating the values in terms of the present worth of their contribution to an enterprise’s future earnings. This method does not require a forecast of the firm’s future earnings but does take into account the contribution of human resources to those earnings. The Likert-Bowers model for group value discussed earlier is the basis of this method. The underlying

<sup>40</sup> Flamholtz (1985), p. 215.

relationships of that model indicate that certain causal variables such as organizational structure and leadership actions influence organizational processes (intervening variables) like motivation, communication, decision making, coordination, and control. Together the causal variables and intervening variables portray the internal health of the organization as a human system. These variables determine the **productive capability** of the organization. With this conceptualization in mind, Likert and Bowers recommend a five-step process <sup>41</sup> for computing a monetary estimate of the expected *change* in the value of a human organization.

- Measure the dimensions of the human organization on a scaled response (commonly called a Likert scale) questionnaire.
- Standardize the scores using statistical methods to account for the degree of variability of the set of responses.
- Calculate the difference between responses for two separate periods of time. The difference (delta) is the change in the specified dimensions of the human organization.
- Multiply the delta times the coefficient of correlation between the variables and an end result variable. This provides an estimate in standard scores of the anticipated change in the end-result variable attributable to a change in the human organizational dimension.
- Translate the standard scores into the measuring units of the end-result variables.

Table 4 illustrates these steps.

**Table 4 – Computing a Monetary Estimate of the Expected Change in the Value of a Human Organization**

RESPONSE CATEGORIES	RESPONSE SCALE	FIRST RESPONSE PERIOD	SECOND RESPONSE PERIOD
<i>To a very great extent</i>	5	0.20	0.25
<i>To a great extent</i>	4	0.50	0.55
<i>To some extent</i>	3	0.30	0.20
<i>To a slight extent</i>	2	0	0
<i>To a very slight extent</i>	1	0	0
<i>Total</i>		1.00	1.00
<i>Weighted mean score *</i>		3.90	4.05

*\*Weighted mean is the sum of the products of response scale and response period percent.*

<sup>41</sup> Flamholtz (1985), pp. 216-217; cited in Likert and Bowers "Improving the Accuracy of P/L Reports," p. 21.

The delta shown in this table is +0.15. The final step is to calculate an estimated change by multiplying the delta times the coefficient of correlation. Assume a coefficient of 0.6. The estimated change in the end-result variable of interest attributable to the change in the human dimension is 0.09. Assume that the end-variable is net profit. Also assume that a 0.10 change in the human dimension is worth \$10,000 change in net profit, then the 0.09 change would be expected to increase net profit by \$9,000.

Flamholtz describes a number of limitations of this model.

1. Use of the coefficient of correlation overestimates the relationship between an intervening variable and an end-results variable. The coefficient of determination provides a better representation of the relationship.
2. The validity of the method depends on the validity of performance measurements available.
3. This method only generates monetary measures when financial performance data is available.
4. A relationship must be established between changes in human organizational dimensions and changes in financial measures.

Although inputs are generally available for the valuation of expense centers, monetary measures of outputs are not. The methods for valuation of expense-center groups usually involve the use of a surrogate of the stochastic reward model. Surrogates for expense-center groups include the following.

- Salary Method involves estimating the value of an expense-center group by capitalizing (reflecting as an asset on a “balance sheet”) the sum of the values of the salaries of the individual members of the group. Although this might provide an initial value or “rough estimate,” it ignores the possible effects of synergy.
- Replacement Costs Method assesses the value of a group as the sacrifice an organization would incur today to recruit, select, hire, train, and develop a group that is capable of providing a set of services equivalent to a group that is presently employed in the organization. This method does capture the effects of synergy.
- Original Costs Method uses the initial cost to recruit, select, hire, train, and develop a firm’s original human resource organization. A difficult aspect of this method is estimating the costs of developing an effectively functioning group. These costs include the development of effective communication, decision making, coordination, and other organization processes commonly called “teamwork.”<sup>42</sup>

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<sup>42</sup> Flamholtz (1985), p. 121.

## **Valuation Methods: Individual and Group – Nonmonetary**

Several nonmonetary techniques exist for valuing human resources. They are important because some decisions do not require monetary measures, and because nonmonetary techniques may be used as surrogates for monetary techniques.

- Skill inventory. Depicts the capabilities of organizational members, to include their education, knowledge and experience.
- Performance evaluation methods. Measures worth of a person in accordance to a set scale or by arranging people in order against one or more dimensions, for example, leadership potential. Included are various rating and ranking schemes for human resources.
- Assessment of potential. Determines a person's capacity for development and promotion as the method of defining their potential service (value) to the organization.
- Attitude measurement. Captures the tendency of people to express feelings about some object. Attitude surveys are used to determine how people feel about their job, pay, working conditions, or the organization. From this information, the organization discovers the sources of satisfaction and dissatisfaction of its people.
- Subjective expected utility. The notion that an organization can estimate the likelihood of obtaining the value that it perceives a person has.

# APPENDIX III

## ELEMENTS OF THE FLAMHOLTZ TRANSFORMATIONAL PROCESS

This appendix outlines elements of the Flamholtz transformational process in terms of the range of policies and practices that comprise the element, the types of costs that are likely to be considered and the characterization of the value of the asset that is affected by the policies and practices.<sup>43</sup> Many of the examples of information discussed have their basis in the private sector. However, with some tailoring, the department can adjust this information to be applicable in its unique environment.

### Acquisition of Human Resources

The focus in this element involves the policies and practices associated with searching for, assessing, selecting, and hiring individuals needed to fill current and future requirements of the organization. The costs include advertising, hiring bonuses, moving individuals and their families, assessment testing, and overhead expenses involved in conducting this function (recruiters, facilities, supplies, etc.). This is the first step in human value management – acquisition of the asset. It creates the potential for adding further value. Fitz-enz<sup>44</sup> highlights the difference between human assets and other kinds of assets and their role in the process: “Everyone acknowledges that people are the key asset. . . . All other assets are nothing more than commodities that can be purchased at market prices. Once purchased and delivered, the others are inert, depreciation assets. Only the human asset has potential to learn, grow, and contribute.”

Human resource accounting is capable of providing another vital piece of information – the *expected future value* to the organization of the acquired human resources in both quantitative and qualitative terms. Other types of capital have an expected value at the time it is purchased. The “purchase price” for an asset is normally less than its “value.” However, in the case of human assets, the purchase price (the expenses incurred to hire the individual and perhaps initial entry training) would be far less than the value (say the salary paid over the term of initial service obligation). If the organization had to pay a purchase price more closely related to the value of the human assets, the organization might choose to engage in a more rigorous evaluation of prospects to ensure that the full value would be realized. As a case in point, attrition during the first term is approximately 30 percent – one third of those entering active duty fail to complete their obligation. The foregone value is not a cost to the organization, although it must incur additional expenses to hire a replacement. Within the

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<sup>43</sup> Flamholtz (1985), pp. 12-18.

<sup>44</sup> Fitz-enz (1995), p. 45.

context of the current budget process, the cost of attrition does not bring as much pressure to bear on the policies and practices that affect it as a process that more accurately characterizes the value of the asset otherwise might.

In other words, changing the way an organization thinks about the asset may change the amount of assessment in which the organization invests (to determine characteristics that relate to behaviors and “fit with the organization” or “fit with the job,” for example) during the acquisition stage; this will affect future attrition, which, in turn, will affect future acquisition investment (as well as the effectiveness of the development investment <sup>45</sup>). This example highlights the interconnected nature of the elements of the transformation process and the complexity of the investment decisions that must be made if the financial resources devoted to human resource management programs are to be allocated efficiently.

Other kinds of measures that an organizations might use to determine the “bang it is getting for its bucks” emerge. Determining the actual cost of acquiring the human resources required and their actual contribution to the organization can highlight the efficiency and effectiveness of this transformational process. For example, the ratio of the value of the assets acquired in a particular time period and the resources devoted to the acquisition of these human resources would permit a decision maker to track the effectiveness of the stage of the transformational process over time or the effective-ness of different mixes of policies and practices targeted to different types of human assets. Further, actual costs and value can be measured for comparison to estimates.

## Development of Human Resources

The focus in this element involves the policies and practices associated with various training and educational activities that are designed to improve technical, leadership/managerial (self or external) and interpersonal skills. Programs that support this process can be formal or informal; they can be provided internally or externally; they can be targeted at increasing firm-specific human capital or be more general. Expenditures for human resource development in public organizations are being viewed more as investments in human capital. <sup>46</sup> The costs include direct costs – personnel (training participants, trainers and other personnel, and total direct outside personnel costs); travel, per diem, accommodations, and incidental expenses; outside goods and services; and facilities – and indirect costs – overhead costs, facilities, and equipment.

The budget process is currently capable of capturing cost estimates for training, but is less adept at delineating the return on such investments (the increase in the value of the human capital). Again, the techniques of human resource accounting described below can help calculate the expected return on a proposed investment.

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<sup>45</sup> Training provided to people who leave the organization is, in a sense, wasted and thereby reduces the efficiency of that training. This neglects, of course, externalities in the form, for example, of any social value that training may have.

<sup>46</sup> Klase, p. 665.

Questions might focus on the increase in value in terms of higher productivity or decreased turnover accruing from an investment in training. This value, in some cases, can be converted to dollars (for example, in terms of reduced manpower levels or reduced acquisition costs, or both) to calculate a return on the investment. In other cases, the value will remain more qualitative (for example, its contribution to increased creativity or adaptability); even in these cases, the value is important in efforts to compare different policies and practices for achieving the outcomes related to strategic ends or to compare other means (for example, process or technology) to those ends.

As noted above, the transformational processes are interrelated – change in one results in change in another, intended or unintended. For example, “make versus buy” is a classic decision: an organization can acquire persons with the desired skills or develop desired skills in persons already in the organization. An investment in acquiring the desired skills could produce significant savings in development costs. Not making the investment avoids acquisition costs but might increase development costs significantly. Not only do these alternatives have different costs (investments), they have different impacts on the value of the human assets, as well. The calculation of the return on investment can be particularly useful in capturing the full effect of policy changes when they cut across elements of the transformational process.

A possible result of making sound, strategic decisions to invest in the transformational processes is resource savings – some of which could show up in a time span encompassed by the current Future Year Defense Plan (FYDP).<sup>47</sup> Flamholtz cites an example of the Navy’s use of the human resource accounting technique of replacement cost for evaluating policies affecting industrial engineers. An investment in the selection process to hire more experienced engineers was shown to be cost effective primarily as a result of its effect on reducing training costs.<sup>48</sup>

## **Allocation of Human Resources**

The focus in this element involves the policies and practices associated with assigning people to various roles and tasks in the organization, including identifying positions and candidates, assessing, selecting, and moving individuals needed to fill current and future requirements of the organization. The costs include salaries for those identifying vacancies and managing fill processes for organizations, travel expenses of candidates and families from present to future location, and time not available for work due to movement (an opportunity costs). Three (often conflicting) objectives influence assignments: job productivity – the most qualified person is assigned; human resource development – incumbents are expected to develop skills through on-the-job learning; and individual satisfaction – the people assigned have their needs met by the job.

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<sup>47</sup> A study conducted by the American Compensation Association of 217 firms using competency based human resource management plans showed positive results after 1 year.

<sup>48</sup> Flamholtz (1985), p. 144.

In the private sector, the focus of the allocation decision is often solely on job productivity. Focus on only one of these objectives can limit the amount of value that is generated by this element of the transformational process. Some might argue that the department uses assignments today primarily for human resource development. That leaves two objectives under which the department can improve the value of its human assets through its assignment process: matching qualifications better and providing more choice where appropriate. Even the objective of job satisfaction can increase the value of human assets, through appropriate policies and practices, by increasing retention (which, in effect, increases the useful life of the asset). All three objectives can increase the value of the human assets; the question is what mix of policies and practices increases that value the most. As another example, a perennial issue is permanent change of station moves. Some of these moves clearly increase the value of the human asset (moves for developmental purposes, for example), while some may not appear to have the same effect (rotational moves to the same type of position because someone else needs to come back from an overseas tour, for example). Different policies and practices for assigning will have different implications on the value of human assets and different returns on investments.

## **Conservation of Human Resources**

The focus in this element involves the policies and practices associated with identifying, monitoring, managing, and planning to sustain the capabilities or competencies of individuals and groups/teams (human organizations like a functioning management team). The costs include salaries for those engaged in assessing capabilities that should be sustained, operational costs for the process or system that provides early warning that obsolescence of capabilities are occurring, mechanisms for practicing skills that must be maintained but are not part of a current assignment, retraining when early warning systems fail, and replacement if turnover occurs.

Like other types of assets, without systematic planning, monitoring, and maintenance, human capabilities decline. This deterioration ultimately leads to retraining or replacement costs. Human resource accounting can be used to show the cost of replacing individuals who leave the organization because their skills, experiences and knowledge have exceeded their useful life. As a preventative measure, human resource accounting can be used to monitor trends in indicators that track the likelihood of turnover. Qualitative techniques, for example, attitude surveys, can provide early warning of changes, allowing time for assessment and response before turnover occurs.



## **Utilization of Human Resources**

The focus in this element involves the policies and practices associated with employing human assets to achieve organization outcomes. The costs include salaries for those involved in developing and maintaining work roles and relationships of individuals and teams, technology/tools/equipment that enable people to use their skills, experience, and knowledge to complete work tasks, process engineering/reengineering, and distribution of information/data. This stage of the transformation process is the most difficult to place a value on. Further work is required.

## **Evaluation and Reward of Human Resources**

The focus in this element involves the policies and practices associated with measuring the productivity (performance in the current job or role), promotability (ability to perform at higher levels of the organization) of people, and the administration of rewards (compensation, promotion, and symbolic rewards like performance appraisals) to motivate and reinforce the desired performance of people. The costs include salaries of those involved in designing and implementing performance measurement and reward systems that match the strategic intent of the organization, investment and operating costs of technology/information systems to allow efficient reporting of performance to management and individuals, and of structure and processes required to administer measurement and reward systems.

Evaluation provides insight into the actual or perceived value of individuals or groups. It can lead to further development of the asset based on observed potential or to overcome observed deficiencies or erosion of capabilities. Evaluations also contribute to the accurate “pricing” of the asset through variable pay or increases in fixed pay.



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